

Its clear and faultless printing on good paper, the trustworthy authority for the determinations, and the elaborate care taken with synonyms and localities, altogether make this book handy, easily consulted, and of exceeding value—indeed indispensable—to all geologists interested in or occupied with Vertebrate Fossils.

*North-American Geology and Palæontology for the use of Amateurs, Students, and Scientists.* By S. A. MILLER. Large 8vo, pp. 664. Cincinnati, Ohio: 1889. Dulau and Co., London.

THE first edition of this work was published in 1877 and duly noticed in the *Ann. & Mag. Nat. Hist.* ser. 5, vol. i. (January 1878) pp. 99–101. A “second edition” (so called, but in reality only a Supplement) was published early in 1883 (with a short preface, consisting mainly of extracts from letters of approval) and bound up together with a reissue of the first edition and an index to both in the same volume, making 334 pages (88 more than the first edition). The third edition, now before us, consisting of 664 pages, takes on a new feature by the reproduction of a great many (1194) woodcuts illustrative of Palæozoic genera and species found fossil in Canada and the United States. Eighty-five pages are occupied with an extended notice of Geology in general and the geological structure of North America in particular, worked up from the Reports of various State Surveys, which was confined to nineteen pages in the first edition. On the other hand, Prof. E. W. Claypole’s essay on the “Construction of Systematic Names in Palæontology,” pp. vii–xv in the first edition, has been modified into eleven dogmatic pages (90–100) on “Nomenclature.”

Introductory remarks and classifications are given for both the Vegetable and Animal Kingdom and for the Classes and Orders as far as their Palæozoic members are concerned. In the Molluseoida only the Bryozoa [Polyzoa, Busk] have a place, the Brachiopoda being relegated to the Mollusca.

Diagnoses of the genera are copied or attempted throughout, and many new genera and species, determined by the author himself, are included with figures.

It would have been well had the author given his attention to all the critical remarks offered in the review of his book in January 1878. We might even now repeat much of what was there stated, especially about diphthongs being often ignored and words and references in German and French being printed without a fit knowledge of these modern languages. Indeed, when the reader refers to the remarks on *Orophocrinus* versus *Codonites* at p. 265, he finds not only a characteristic sample of how German words are misprinted, but we see a sad example of narrow, dogmatic, and invidious treatment of the German language, of a German scientific periodical, and of a German palæontologist!

We think that Mr. S. A. Miller has acted very wisely in omitting his etymological explanations of the meaning of specific names from

the text, for very many were execrably bad in the earlier edition, and might have unfortunately been repeated even now: for we still see here and there the ugly mark of the illiterate amateur—for instance, where *lepus* in *turrilepus* is “a scale,” and where such a derivation as *lepis*, a scale, and *dittos*, double, is given for *Lepeditia*, which is really derived from the name of M. Leperdit, of Rennes. In this instance, as in others, we see that the author has not referred to the original nor to some later accounts of the genus. Indeed, it seems probable that the author’s personal researches in palæontological books and scientific periodicals, whether British, French, or German, have been too limited for any one presuming to treat so extensively of fossil organisms as this Catalogue is supposed to do. The book is designed on a good basis, and doubtless this edition is better and therefore more useful than its predecessors; but the author’s more accomplished friends, of different specialities, might aid him very much both philologically and palæontologically in a future revision of his Catalogue.

The hard pedantry of refusing initial capitals in specific names, of having only one letter “i” in the genitive masculine, of dogmatically altering *grapsus* (in combination) to *graptus*, of ignoring the masculine gender of the Latinized words *chætilus* or *chilus*, *rhynechus*, and *phyceus* (in combination), because the Greek forms are neuter, is not good even in the dog-Latin of modern naturalists.

Although “Students and Scientists” may escape unhurt among the errors and weaknesses of this Catalogue, we are sorry for the “Amateurs,” led by an amateur who tells them (in his Glossary, pp. 629 *et seq.*) that *ægilops* is “an acorn,” *atilis* “flattened,” *aucella* “a little bird,” *bellulus* “very pretty,” *breviusculus* “very short,” *cerasiformis* “like a dried cherry,” *dikrocheilus* “two-edged,” *euginum* “fertile,” *insectus* “uncut,” *mummiiformis* (!) “resembling a mummy,” *temerarius* “accidental, casual,” *vadus* “full of shadows,” and above all “*gracilius, a, um,*” “*majus, a, um,*” and “*minus, a, um.*” the neuter comparative forms of *gracilis*, *magnus*, and *parvus*! Had he given us also *plus, plu, plum*, he would have made the series nearly complete!

*A Catalogue of North-American Palæozoic Crustacea, confined to the non-Trilobitic Genera and Species.* By ANTHONY W. VOGDES. Printed in advance of vol. v. no. 1 of the ‘Annals of the New-York Academy of Sciences.’ Svo. 38 pages, 2 plates, and some woodcuts. Author’s edition. Fort Hamilton, New York Harbour, November 1889.

A SYSTEMATIC arrangement of the genera under orders and families occupies five pages and a half, and the annotated catalogue of the American species follows, with nine woodcuts (mostly outline diagrams) of types and two lithographic plates, one of them illustrating Xiphosures and Eurypterids from a plate in Dr. H. Woodward’s memoir, 1867, and the other Ostracods and Phyllopods from T.